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Title: **EP0216947B1: Card-shaped data carrier and method of producing it**

Country: EP European Patent Office (EPO)
Kind: B1 Patent (See also: [EP0216947A1](#))

Inventor(s): Maurer, Thomas

Applicant/Assignee:



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Issued/Filed Dates: Jan. 2, 1991 / Oct. 1, 1985

Application Number: EP1985000112432

IPC Class: G06K 19/08; B42D 15/02;

Priority Number(s): Oct. 1, 1985 [EP1985085112432](#)

INPADOC Legal Status: Show legal status actions

Designated Countries: AT BE CH DE FR GB IT LI LU NL SE

Attorney, Agent, or Firm: TER MEER - MÜLLER - STEINMEISTER & PARTNER ;

Family: Show known family members

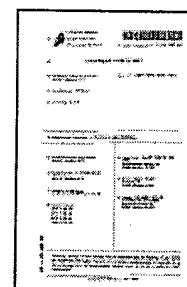
Claims:

[Hide claims]:

1. Card-shaped data carrier bearing a relief with a substrate and at least one transparent covering film, the substrate being provided with information readable through the covering film by means of a laser beam which passes through the covering film, **characterised in that** the transparent covering film (2) bears the relief (3), which overlaps the information area at least partially and is applied before the information is recorded, this relief producing an optical lens effect and thus characteristically modifying the information that is to be recorded by means of the laser beam.

2. Card-shaped data carrier according to Claim 1, **characterised in that** the relief (3) is in the form of a raised pattern of lines or dots.

3. Card-shaped data carrier according to Claim 2, **characterised in that** the relief (3) is in the form of a raised pattern of convex lines or dots.



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4. Card-shaped data carrier according to Claim 3, **characterised in that** the relief (3) is in the form of cylindrical lenses.

5. Card-shaped data carrier according to at least one of the foregoing Claims, **characterised in that** the cylindrical lenses are in the form of a pattern of lines covering the surface.

6. Card-shaped data carrier according to at least one of the foregoing Claims, **characterised in that** the pattern of lines or dots covering the surface is in the form of lines, concentric circles, two-dimensional lettering and/or a two-dimensional logo.

7. Card-shaped data carrier according to at least one of the foregoing Claims, **characterised in that** the relief (3) is in the form of a pattern of lines or dots which does not cover the surface.

8. Card-shaped data carrier according to Claim 7, **characterised in that** the relief (3) is in the form of letters, a monogram, an engine-turned pattern, a stamp, a national emblem or a logo made up of lines.

9. Card-shaped data carrier according to at least one of the foregoing Claims, **characterised in that** the information is characteristically modified by interference phenomena between the pattern of lines or dots of the relief (3) and the grid of the information recording.


10. Method for the manufacture of the card-shaped data carrier according to the foregoing claims, **characterised in that** a transparent covering film (2) provided with the relief (3) which has an optical lens effect is bonded on to the substrate (1) with the aid of a lining sheet provided with a negative relief pattern produced by engraving, or else after a flat covering film has been bonded on, it is provided with the relief (3) with the optical lens effect by embossing, after which the information is recorded through the covering film onto the substrate (1) at least partially in the area underneath the relief by means of a laser beam. 10. Method for the manufacture of the card-shaped data carrier according to the foregoing claims, **characterised in that** a transparent covering film (2) provided with the relief (3) which has an optical lens effect is bonded on to the substrate (1) with the aid of a lining sheet provided with a negative relief pattern produced by engraving, or else after a flat covering film has been bonded on, it is provided with the relief (3) with the optical lens effect by embossing, after which the information is recorded through the covering film onto the substrate (1) at least partially in the area underneath the relief by means of a laser beam.

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Other Abstract Info: DERABS C87-095120

Foreign References: No patents reference this one



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Credit card - with cylinder lenses on cover for surface to focus laser beam on underlying substrate for recording data

Assignee: **LEIGH-MARDON PTY LTD** Standard company (LEIG...)
MAURER ELTRN GMBH Non-standard company
 Inventor(s): **MAURER T;**
 Accession / Update: **1987-095120 / 198714**
 IPC Class: **B42D 15/02 ; G06K 19/08 ;**
 Derwent Classes: **A84; P76; T04;**
 Manual Codes: **A12-D(Others) , T04-C(Digitally marked record carriers)**

Derwent Abstract

DERWENT RECORD

(EP0216947A) An identity or credit card is made of substrate (1) which is a material with a high absorption for the laser radiation used, e.g. paper or plastic with a filler. A transparent cover foil (2) is made e.g. of PVC or polyester. A relief of the shape of cylinder lenses (3) is applied to the top of the foil (2), to be used for recording data on the boundary of substrate and cover foil as indicated by the items (4,5,6).

Advantage - This greatly increases the security against falsification of the data.

Abstract info: **EP0216947A: Dwg.2/3 , EP0216947B: Dwg.2/3**

Family:

Patent	Issued	DW Update	Pages	Language	IPC Class
EP0216947A *	April 08, 1987	198714	8	German	B42D 15/02
Des. States: (R) AT BE CH DE FR GB IT LI LU NL SE					
Local apps.: EP1986000112432 ApplDate:1986-10-01 (86EP-0112432)					
DE3581082G =	Feb. 07, 1991	199107		German	B42D 15/02
Local apps.:					
EP0216947B =	Jan. 02, 1991	199102		English	B42D 15/02
Des. States: (R) AT BE CH DE FR GB IT LI LU NL SE					
Local apps.:					
AU8666983A =	June 30, 1988	198834		English	
Local apps.:					

Priority Number(s):

Application Number	Application Date	Original Title

EP1986000112432	Oct. 01, 1986	Method of testing and indicating the operability of a distributive data-processing system
EP1985000112432	Oct. 01, 1985	Card-shaped data carrier and method of producing it

Polymer Multipunch Codes: [Show polymer multipunch codes](#)

Poylmer Keyterm Serial Number: [Show polymer keyterm serial numbers](#)

Citations: DE3248784 : AUSWEISKARTE UND VERFAHREN ZU IHRER HERSTELLUNG
 FR2450164 : CARTE D'IDENTIFICATION
 FR2496938 : CARTE D'IDENTIFICATION DONT LES INFORMATIONS SONT PORTEES A L'AIDE D'UN RAYON LASER AU TRAVERS DE MOTIFS DE SECURITE DISPOSES EN SURFACE TELS QUE DES GUILLOCHURES ET PROCEDE DE REALISATION D'UNE TELLE CARTE
 FR2525007 : CARTE D'IDENTIFICATION A PLUSIEURS COUCHES ET SON PROCEDE DE FABRICATION
 GB2132136 : IDENTITY CARD

Title Terms: CREDIT CARD CYLINDER LENS COVER SURFACE FOCUS LASER BEAM UNDERLYING SUBSTRATE RECORD DATA

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